



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of Johan Van Brabant, et al.) Art Unit 1773
Application No. 09/834,835) Examiner: Jackson, Monique R.
Filed: 13 April 2001)
For: *Coated Metal Reinforcement Element*) Peoria, IL 61602-1241
and Coating Materials)
Attorney Docket No. 64251-020)

DECLARATION UNDER 37 CFR §1.132

Daniel Mauer, having personal knowledge of facts set forth herein, hereby declares that:

1. I am an inventor of U.S. Patent Application No. 09/834,835, which was filed on 13 April 2001, for the invention entitled: Coated Metal Reinforcement Element and Coating Materials, that claims priority benefits under Title 35, United States Code, §119 of PCT application No. PCT/EP99/02905, filed on 22 April 1999.

1. I have a Ph.D. in chemistry from the UNCL (Université Catholique Louvain) at Louvain-La-Neuve.

2. I have over 25 years of experience as an engineer/scientist.

3. I am currently the R&D manger at Bekaert Technology Center of N.V. Bekaert S.A., locatd in Zwevegem, Belgium, and I have been with N.V. Berkaert S.A. for eight (8) years.

4. I am an inventor and have over four (4) U.S. and foreign granted patents and over four (4) patent applications.

5. I have worked in the field of metal-elastomer composites for twenty-five (25) years and I am well familiar with the invention claimed in the above application.

6. I understand that the Examiner in the above application has rejected several claims in the above application as being anticipated by a patent issued to Garnier et al. (“Garnier”). The Examiner believes that Garnier anticipates the invention of our application because, according to the Examiner, Garnier discloses an adhesive substance and a vulcanizable polymer that are both coated on a metallic reinforcing carrier. That opinion is incorrect.

7. Garnier discloses an adhesive substance to be coated on a metallic reinforcing carrier for a polymeric or elastomeric material. The substance comprises functional groups for bonding to the metallic surface of the reinforcing carrier. Unlike Garnier, the invention of our application concerns the deposit of a coating on the metallic surface where the coating comprises both functional groups for bonding to the metallic surface **and a polymer** co-polymerizable with the polymeric or elastomeric material. This presence of the polymer already in the coating on the carrier allows for an improved level of adhesion with the polymer already in the coating on the carrier allows for an improved level of adhesion with the polymeric or elastomeric material. In Garnier, the coating does **not** comprise such a **polymer**. In great contrast the Garnier coating only comprises a **monomer**.

8. It is my understanding that the Examiner also rejected several claims of the above patent application as being anticipated by patent number JP 58-193134 (“JP ‘134”). The Examiner states that the invention taught by JP ‘134 is the same as the invention of our application. This opinion is also incorrect.

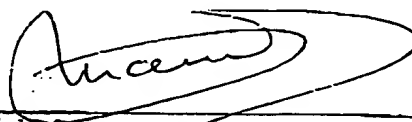
9. JP ‘134 discloses a steel reinforcement element with a liquid rubber containing –COOH or –OH functional groups and a coating that is achieved by immersing a steel element in a pure liquid rubber bath. Because of the viscosity of the liquid rubber, it is impossible to achieve the deposition of thin layers. Thus, as stated above, the invention of our application is different because, unlike JP ‘134, it allows for the deposition of a thin layer which provides for improved adhesion. Also, our invention provides for a layer of a polymeric or non-cured

metal surface on top of said coating for further reinforcement. This provides for a thin coating layer bearing functional groups bonding to the metal surface and an additional layer without these functional groups. The excellent adhesion between these layers during vulcanization allows for improved adhesion that cannot be achieved by a single thick layer of vulcanizable polymeric material coated to a thickness equal to that of the combined layers. The JP '134 liquid rubber does not comprise functional groups covalently bonded to the metal surface of the reinforcing carrier. Thus, it is my opinion that JP '134 does not teach the invention of our application.

10. I also understand that the Examiner rejected claims of our application as being obvious in light of Garnier and the prior art. Neither Garnier, nor any other prior art reference, teaches or suggests that depositing an adhesion promoter from solution allows for thin layers and improved adhesion. Therefore, it is my opinion that the invention of our application is not obvious to one skilled in the art.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Signed at Zwevegem this 23rd day of May 2003.


Daniel Mauer